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Reg. No. :

Name :

Fourth Semester M.Sc. Degree Examination, July 2024

Biotechnology

**BT 403 : FOOD AND DAIRY BIOTECHNOLOGY / BASICS OF BIOPROCESS
TECHNOLOGY**

(2018 Admission onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

I. Answer any **two** of the following:

1. Explain the parts of bioreactor? Briefly discuss the function of each part.
2. Discuss about physical and chemical methods of cell disruption during down stream processing.
3. Describe the steps involved in the production of amylases? Add a note on its industrial applications.

(2 × 15 = 30 Marks)

SECTION – B

II. Answer any **nine** of the following:

4. Differentiate between aerobic and anaerobic fermentation.
5. Different between chemostat and Turbidostat.
6. Briefly describe the principle of ion exchange chromatography.

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7. Elaborate the methods of strain improvement.
8. Explain the principle of affinity chromatography.
9. Outline the steps in downstream processing.
10. Describe the different stages of bacterial growth curve.
11. Outline the steps involved in the biosynthesis of penicillin.
12. Define Pasteurization. Add a note on the types of pasteurization.
13. Briefly describe the importance of value addition of dairy products.
14. Describe the principle of Methylene Blue Reductase test.
15. Mention the key steps in the industrial production of cheese.

(9 × 5 = 45 Marks)

